

Borough of Chatham.



TO THE MAYOR AND CORPORATION OF THE BOROUGH OF CHATHAM.

GENTLEMEN,

The following is my report on the Sanitary condition of the Borough of Chatham during the year ending December 31st, 1909. It is satisfactory to again record a continuance of the low rates of mortality which prevailed during the preceding three years, and for which efficient sanitary administration may claim some credit.

Vital Statistics.

Area in Acres	4444.298
Population (Census 1901)	37,057
Population (estimated)	43,831
Births registered	1,093
Birth rate per 1,000	24.9
Nett Deaths registered	517
Death rate per 1,000	11.8
Zymotic Death rate	1.1
Infantile Mortality per 1,000	107
Annual rateable value	£149,736

The Borough of Chatham is situated on the southern bank of the Medway, its principal extensions being to the south-east, and more recently to the south-west. The geological formation is chalk, with a varying depth of overlying soil. In the Luton valley is a bed of clay over the chalk. The district is hilly in character, and the older houses are for the most part in the lower portion of the town. Of late years many houses have been built on the higher levels of the district. Near the river the level of the ground water is only about 8ft. from the surface. Although many of the houses in the older part of the town are in bad repair and irregularly built, they nearly all possess open space in the vicinity. Chatham is particularly fortunate in the matter of breezy open spaces, which doubtless go far to counteract the deleterious influences of the type of property just referred to.

POPULATION.—It is always difficult, especially near the end of an intercensal period, to make an accurate estimate of the population of a district. The usual methods are by assuming that the rate of increase during the previous intercensal period remains constant, and that the number of inhabitants per house is the same. My estimate of the population of Chatham up to the middle of 1909 is 43,831. The next official census is in 1911. The bulk of the population is of the

artisan class, most of whom are occupied in Chatham Dockyard. Besides these are a large number of soldiers and sailors, and of the remainder a few are occupied in the manufacture of clothing, the rest being service pensioners, tradespeople and others concerned in the supply of the various articles used by the general population.

BIRTHS.—The total number of Births registered during 1909 was 1,193, of which 516 were males, and 577 females. There were 49 illegitimate births, 9 in St. Mary's Ward, 34 in Luton Ward, and 6 in St. John's Ward.

Birth Rate, 24·9 per 1,000.

The following table shows the natural increase of population, that is the increase of Births over Deaths in each division of the Borough:—

	Births.	Deaths.	No. of Births over Deaths.
St. Mary's Ward ..	214	115	99
Luton Ward ..	583	192	391
St. John's Ward ..	296	130	166
	<hr/>	<hr/>	<hr/>
	1093	437	656
Deaths in Institutions		80	80
	<hr/>	<hr/>	<hr/>
		517	576

The nett result is an increase of Births over Deaths of 576.

DEATHS.—The nett total of registered deaths during 1909 was 517. In order to arrive at this total the actual return received from the Registrar has to be corrected by the exclusion of the deaths of such persons as belong to other localities, and the inclusion so far as can be ascertained of the deaths of such persons as belong to Chatham, but who have died outside the district. The former class are known as "non-residents," the latter as "residents."

The deaths of "non-residents," chiefly persons belonging to the neighbouring Boroughs of Rochester and Gillingham, occurred for the most part in the Medway Union Infirmary, whilst the deaths of the "residents" were in St. Bartholomew's Hospital, St. William's Hospital, and Fort Pitt Military Hospital, all of which are situated in the Rochester Registration District.

The following table shows the number of Deaths during the past nine years:—

1901	.....	646	1902	.....	674
1903	.....	574	1904	.....	630
1905	.....	578	1906	.....	560
1907	.....	581	1908	.....	558
		1909	.....	517	

The total number of deaths occurring in the Medway Union Infirmary was 143, of which number 80 were of "residents" and 63 of of "non-residents."

The rate of mortality is 11·8 per 1,000.

This is the lowest rate of mortality recorded during my 21 years' experience as your Medical Officer, and as will be seen in Table I., which gives comparative mortality statistics during the past 10 years, the gradual decline during that period is well marked, and furnishes most satisfactory evidence of the benefits of the careful sanitary administration of the Borough, in spite of the disadvantages attending the methods of excrement and sewage disposal which prevail in Chatham.

The following table shows the Mortality in England and Wales during 1909 as compared with Chatham :—

	Annual Rates per 1,000 living.			
	Births.	Deaths of all ages.	Principal Epidemic Diseases.	Infant Mortality.
England and Wales	25·6	14·5	1·12	109
76 Great Towns	25·7	15·6	1·42	118
143 Smaller Towns	24·8	14·5	1·08	111
England and Wales (less 218 Towns)	25·6	13·6	0·80	98
CHATHAM	24·9	11·8	1·1	107

The ages at which deaths occurred were as follows :—

Under 1 year	117
1 and under 5 years	46
5 and under 15 years	34
15 and under 25 years.	13
25 and under 65 years.	154
65 and upwards	153

The number of deaths registered in different parts of the Borough was as follows :—

St. Mary's Ward	115
Luton Ward	192
St. John's Ward.....	130
Medway Workhouse.....	80

The numbers during last quarter of the year were :—

First Quarter.....	162
Second Quarter.....	120
Third Quarter	101
Fourth Quarter.....	134

The numbers registered during each month were :—

January, 61 ; February, 43 ; March, 58 ; April, 47 ; May, 30 ; June, 43 ; July, 32 ; August, 36 ; September, 33 ; October, 35 ; November, 41 ; December, 58.

Table I., appended to the Report, gives a comparative statement of births, deaths, and rate of mortality during the past 10 years.

An approximate estimate of the population in each Ward can be made by ascertaining the number of inhabited houses in each, and allowing an average number for each house. Calculated on this basis the rates of mortality in each Ward are as follows :—

St. Mary's Ward	11· per 1000
Luton Ward	9.3 per 1000
St. John's Ward	10· per 1000

INFANTILE MORTALITY.—The Infantile Mortality or number of deaths under 1 year of age to every 1,000 births registered is 107, as compared with 127 per 1,000 in 1908, 124 during 1907, 137 during 1906, 126 during 1905, and 178 during 1904.

Table V. shows in detail the various causes of deaths amongst infants.

In my Report for 1908, and in previous reports, I have discussed the various circumstances bearing on the subject of Infant Mortality, and do not propose to repeat my remarks. The salient and satisfactory fact is that, like the general mortality, the Infant Mortality is also the lowest yet recorded. Doubtless climatic influences have been exceptionally favourable, but I am also of opinion that the general principles of hygiene, which have been preached in season and out, are beginning to receive more recognition amongst a class of people who have hitherto been conspicuous by their neglect of them.

Your Committee have recently decided to adopt the Notification of Births Act, and subject to the approval of the Local Government Board, arrangements have been made for carrying out the objects of this measure. The services of one of the District Nurses has been secured, and her duties will be to periodically visit and advise mothers (especially those of the poorer classes) with respect to the general care and management of their infants. Work of this character cannot fail to be productive of good, and will supplement the efforts of the Health Authority to improve the sanitary condition and surroundings of the houses in this district.

It will be seen, on reference to Table V., that whereas the deaths of legitimate children were about one-tenth of the number born, the deaths of illegitimate children were nearly one-third of the number born. As these children are generally devoid of a mother's care, and usually in charge of some person hired for the purpose, no better instance can be shown of the effects of neglect, and the want of proper maternal care.

SEX.—The number of deaths amongst males was 261, and amongst females 256.

RESPIRATORY DISEASES. — From this class of diseases, excluding Phthisis, 69 deaths were registered. This low number is evidence of the favourable character of the weather during 1909. The numbers registered from Respiratory diseases during the five previous years were as follows:—

1908	.....	83
1907	.....	92
1906	.....	75
1905	.....	93
1904	.....	86

The deaths were due to the following diseases:—

Bronchitis	.....	43
Pneumonia	.....	24
Pleurisy	.....	1
Other Respiratory diseases		1

PHTHISIS OR PULMONARY TUBERCULOSIS.—From this disease there were 39 deaths. During 1904-'05-'06-'07-'08, the deaths were 73, 63, 56, 56, 51 respectively.

From Tubercular disease of other parts of the body, 20 deaths were registered.

Phthisis Mortality.....0.9 per 1000

This disease which has not inaptly been termed the white scourge, because of its widespread prevalance, and its large annual mortality, is one which I venture to think will in the future show a considerable diminution. Its true causation is well known, the measures necessary for alleviation are also well understood, and what is of equal importance the public at large are beginning to realise its infectivity, and to display an intelligent interest and desire to carry out those precautions which experience has found to be beneficial not only for the prevention but for the cure of the disease.

Since the year 1904, a system of voluntary notification has existed in your District, but owing to the fact that very few notifications are received, I cannot claim much good result from it. Additional information with respect to fatal cases is received from the Registrar of Births and Deaths, and in every case an effort is made to secure adequate cleansing and disinfection of the rooms occupied by Tubercular patients.

In respect of notified cases the action taken is as follows:—Visitation of premises, and inquiry as to sanitary conditions; all defects being reported and if possible remedied. In addition a circular containing information and advice respecting the general management of Tuberculosis is left, and disinfectants supplied when necessary. Medical men in attendance on Tubercular cases invariably give recommend-

ations respecting the importance of adopting preventive measures, so that the public are rapidly becoming educated and able to co-operate in combating this disease.

In December 1908, a Circular and Regulations as to Tuberculosis was issued by the Local Government Board, the provisions of which came into force on January 1st, 1909. These Regulations provide the Notification to Medical Officers of Health of Sanitary Authorities of cases of Tuberculosis occurring amongst the inmates of Poor Law Institutions, or amongst persons under the care of District Medical Officers, and for the adoption of certain measures of precaution in such cases. Four separate persons are charged with the duties of notification, viz. :—The Medical Officer of a Poor Law Institution in the case of inmates ; the District Medical Officer in the case of “poor persons” on whom they are in attendance ; Superintending Officers of Poor Law Institutions in the case of persons leaving the Institution giving their intended addresses, and Relieving Officers in cases of change of address.

Under Article IX. of the Regulations, Councils are empowered on the advice of their Medical Officers of Health to take similar measures of destruction or disinfection of infected material as are authorised in other infectious diseases, and to assist, or furnish apparatus to any poor person for the purpose of obviating, diminishing or removing infection.

In February, 1909, a memorandum setting out appropriate action under these powers was issued by the Medical Officer to the Local Government Board, and I drew up the following report respecting this memorandum, for the information of your Sanitary Committee :—

TO THE CHAIRMAN AND MEMBERS OF THE SANITARY AND HEALTH
COMMITTEE.

GENTLEMEN,

The Local Government Board have recently issued a “Memorandum on the administrative Measures against Tuberculosis,” the chief points of which I think it well to place before you. In December, 1908, an Order was issued making the Notification of Pulmonary Tuberculosis amongst inmates of Poor Law Institutions, and persons under the care of District Medical Officers compulsory, and the present Memorandum is supplemental to that Order, on which you will find comments in my last Annual Report, but the Local Government Board indicate that it is not desirable to limit the scope of the Memorandum strictly to poor patients, and suggest that its provisions may with great benefit be made applicable to cases of Tuberculosis occurring amongst persons not in receipt of relief.

Tuberculosis is an infectious disease caused by the Tubercle Bacillus, and its development is fostered by all such insanitary conditions as are prejudicial to personal health. Not only is Tuberculosis a preventable disease, but in its earlier stages it is a curable

one. Its progress can be arrested and a large majority of those who are attacked by it will recover if subjected to suitable surroundings and treatment in the early stages of the disease.

The mortality from Pulmonary Tuberculosis is very large, and there are few families who have not at some period felt its ravages, but the spread of improved sanitary conditions and the increasing knowledge of personal hygiene has already caused a decline in its prevalence. These improved conditions are beneficial in two ways:—they have diminished the risks of infection on one hand and have improved the resistance of the population to infection on the other.

The degree of infectiousness of Pulmonary Tuberculosis differs from that of many other infectious diseases in several important respects. It proceeds from one channel only, viz.:—the lungs by expectoration or cough spray, its duration is very protracted, and its infective power can be limited, because *the mode of infection can be controlled by the patient with but little trouble, if he is intelligent and scrupulously careful, whereas in the acute infectious diseases constant isolation of the patient is usually needed to protect susceptible persons.*

These facts show that an exaggerated fear of infection is unnecessary, but they also emphasize the advisability of inculcating more exact knowledge of the disease amongst all classes.

First and foremost is the combating of the ignorance which prevails with respect to Tuberculosis. If the public can once be made to understand the comparative ease with which it can be prevented the battle will be half won, and to accomplish this, educational measures are of the first importance. Active propoganda will gradually increase the number of those who know and practice the essentials of prevention and at the same time diminish the number of those who do not know or understand. For the general community, the teaching of the principles of Hygiene, and the formation of public opinion against the evils of overcrowding, bad housing, intemperance, and indiscriminate expectoration, is requisite and necessary, but for those who are infected or directly exposed to infection special instruction is required, and to make this general, a system of compulsory notification must be adopted. By this means every patient could be so instructed that it becomes within his power to vastly control his powers of infectivity. The duration of the disease is so protracted that complete isolation such as occurs with other infective diseases is absolutely impracticable, but there is no doubt that temporary abode in a sanatorium is productive of excellent results, chiefly because during their stay in these institutions patients receive training in the way of self-management which is of the utmost value, not only to themselves but to all who are associated with them.

Another point of very great importance is the securing of an early diagnosis in all cases of Tuberculosis. At present a very large

number of cases remain undetected and untreated until they are in a comparatively advanced stage, and prior to their recognition there must have been many opportunities of spreading infection, whereas an earlier detection of the disease would have led to the adoption of precautionary measures as regards other people, and to the treatment of the patient, which would be all the more effective for being utilized in the early stages of the disease. One of the most effective means of securing early diagnosis is by means of the Bacteriological examination of the sputum or spit for Tubercle Bacilli, and I would recommend that facilities be given to local practitioners for this purpose.

When a diagnosis is once secured the sooner the patient is informed of his condition the better, and this knowledge would secure his active co-operation with his Medical Attendant, not only for his own welfare, but in regard to the intelligent carrying out of instructions for preventing the spread of disease. Following on this co-operation of doctor and patient would be the supplementary aid given by the public health department in the shape of securing healthy surroundings, the remedying of defects, disinfection, the supply of spit bottles, and the issue of printed matter relative to the control of the disease. By this means a continued co-operation between patient, Medical attendant and Medical Officer of Health would be secured. There is no doubt of the gain to the community as well as to the patient by the adoption of these measures. In the case of patients applying for treatment at the out-patient department of the Local Hospital this co-operation has already been attained, and the patients are given instructions with regard to their management in matters of personal hygiene, and precautions against infection.

One of the recommendations of the Medical Officer to the Local Government Board is the formation of Tuberculosis Dispensaries, the underlying idea of which is suitable treatment combined with a system of domiciliary visitation and investigation either by voluntary or official visitors. In this locality similar work might be organised in connection with existing institutions, the essential points being to give the patient such help and advice as are adapted to his social needs, and to the restoration of his health, and the prevention of infection to others.

Home treatment alone often fails in both these requisites, and therefore where practicable sanatorium treatment should be resorted to. Section 131 Public Health Act 1875 gives Sanitary Authorities power to provide such treatment whether patients are in receipt of relief or not. Although I mention this, I feel that financial consideration will prevent its adoption in this locality, but it is worth while considering whether it will be possible to utilise portions of existing institutions. For this purpose we have an Isolation Hospital, the Wards of the Medway Infirmary, and St. Bartholomew's Hospital,

and doubtless any suggestions made from your Committee to the governing bodies of these institutions would receive full consideration. Sanatorium treatment is directed either towards cure by prolonged stay or towards amelioration and to a training in desirable habits by a stay of limited duration. For example, bearing in mind what I have already said about the importance of early diagnosis, experience has shown that many poor people are curable if treated at an early stage, and even if this result is not attained the improvement gained by a short stay in a Sanatorium is maintained when the patient leaves, because during his stay he has received a valuable training in hygienic habits, and the methods of sputum disposal. His working life is extended, his capacity for spreading infection curtailed, and during his absence his dwelling is disinfected and cleansed, and his relatives temporarily relieved from a source of anxiety.

In the more advanced cases where separate bedroom and nursing accommodation cannot be secured at home, institutional treatment becomes desirable, and the more effectively this can be attained the less the likelihood of spreading infection. Much is already done by general and special hospitals, and by the Workhouse Infirmaries, but further extension is necessary, and in the case of poor persons, the Guardians might well make arrangements for the admission of all cases of advanced Tuberculosis in the wards of the Infirmary.

The following summary will show what is already being done in Chatham, and also what might be done in addition.

At present we have :—

1. Voluntary Notification (not much used).
2. Notification of all deaths from Pulmonary Tuberculosis by Registrar.
3. Compulsory Notification of Paupers
4. Visits to infected houses.
5. Distribution of handbills containing instructions as to Management.
6. Cleansing and disinfection of premises, clothing and bedding.

If additional measures are adopted they would comprise some or all of the following :—

1. Compulsory Notification of all cases.
2. Facilities for Bacteriological Diagnosis such as are given in the case of Diphtheria and Enteric Fever.
3. The supply of Spit Bottles.
4. The provision of a Tuberculosis Dispensary or the formation of a system of home visiting in connection with Hospital Out-patient treatment.

5. Provision of Sanatorium for temporary treatment.
6. Compulsory admission of all advanced pauper cases into Infirmary.

It will be gathered from the above brief outline of some of the measures which can be utilised against Tuberculosis that its spread depends on two chief factors, viz. :—the number of cases from which infection can be derived, and on whether the dosage of infection is modified by the conditions under which the recipients live. It therefore follows that the occurrence of future cases of Tuberculosis is largely conditioned by the adoption of such measures as will (a) prevent the patient from scattering infection by cough and expectoration and (b) will secure his separation from those susceptible to infection.

The first aim is secured by early recognition, early treatment and advice, and above all by the intelligent co-operation of the patient, the latter aim by providing the patient with a separate bedroom and suitable nursing, or if this is impracticable, as in many instances it will be, by the provisions of more efficient institutional treatment especially for the advanced cases of the disease.

I am, Gentlemen,

Your obedient servant,

J. HOLROYDE,

Medical Officer of Health.

Chatham,

June 15th, 1909.

With respect to the additional measures suggested the following action has been taken :—

- (1) Application was made to the Local Government Board for powers to adopt the Compulsory Notification of Tuberculosis, but at present it is not deemed advisable to proceed further than Voluntary Notification except in the case of Poor Law cases.
- (2) Facilities for Bacteriological diagnosis are now available.
- (3) Spit bottles can be supplied at cost price.
- (4) and (5) Not practicable at present.
- (6) A recommendation respecting the compulsory admission of all advanced pauper cases into the Infirmary was made to the Guardians, who are willing to do all in their power to secure this.

I would like at this point to say that the treatment now being carried out at the Medway Union Infirmary is most successful. The arrangements are excellent in every way—open air treatment at the southern end of the building is secured, and considering the class of

cases which are treated at this Institution, the results are remarkable, and form one of the most admirable object lessons of the benefits of well regulated open air treatment that it is possible to see. Whatever faults many critics may find in present day Poor Law administration—the Guardians and their Medical Officer deserve all praise for what they have accomplished in the treatment of Tuberculosis in their infirmary.

HEART DISEASES.—From this cause 118 deaths were registered as compared with 100 during 1908. In this class are included all cases of Cerebral Hæmorrhage which are primarily due to disease of Blood Vessels.

CANCER and other forms of Malignant disease caused 31 deaths as compared with 36 during the previous year.

Alcoholism caused 6 deaths.

From diseases of the Nervous System there were 36 deaths and from Accidents and Suicide 22 deaths resulted.

INFECTIOUS DISEASES.—In Table III. appended to this report will be found a return of the number of Infectious cases notified during the year 1909 in each division of the Borough. The total number of cases notified was 194. During the past seven years the yearly totals have been as follows:—

1903	...	...	...	...	235
1904	...	...	...	...	160
1905	...	...	...	...	117
1906	...	...	...	...	302
1907	...	...	...	...	208
1908	...	...	...	...	197
1909	...	...	...	...	194

The following table shows the mortality from diseases of this class and from Enteritis during 1908 and 1909:—

	1908.	1909.	Increase or Decrease.
Scarlet Fever	0	4	+ 4
Measles	9	0	— 9
Whooping Cough	11	1	—10
Diphtheria and Membranous Croup	7	16	+ 9
Enteric Fever	8	3	— 3
Diarrhœa	11	9	— 2
Enteritis	11	18	+ 7

In addition to the diseases scheduled under the Infectious Diseases Notification Act, there are certain non-notifiable diseases, respecting which information is desirable. This is obtained by an

arrangement with the Education Department. The head teacher at each school forwards every week the names and addresses of such children as are absent on account of Measles, Whooping Cough, Chicken Pox, or Mumps, and all children from infected houses are excluded from school until risk of infection is at an end. The spread of these ailments is thus manifestly curtailed, and there is less likelihood of resort to school closure.

In order to prevent the spread of infection by books obtained from the Free Library, the librarian is informed every week of the names and addresses of such persons as are notified to be suffering from infectious disease, and no books are issued to these houses until they are declared to be free from infection. Books already in use are disinfected before being returned to the library.

MEASLES AND WHOOPING COUGH were practically non-existent during 1909, and only 1 death from the latter cause was registered.

SCARLET FEVER.—There has been no extensive prevalence of this disease, but its infectivity is so great, and the attacks, as a rule, are of such a mild character, that many cases go unrecognised and untreated, thus acting as carriers of infection. This infection is often propagated by nose and ear discharges, which are prone to occur after scarlet fever.

The total number of cases notified was 87, of which 63 were removed to St. William's Hospital for treatment. Of these cases 10 were in St. Mary's Ward, 52 in Luton Ward, 17 in St. John's Ward, and 8 in the Medway Union Workhouse. There were 4 deaths. The following table gives the details of Scarlet Fever in Chatham during the past 10 years :—

Year.	Population	Total No. of cases Notified	No. under 5 Years	Deaths Registered	Treated in Hosp.	Attack Rate per 1,000 of Population	Mortality per 1,000	Percentage removed to Hospital.
1900	36425	101	28	4	72	2.8	.01	71
1901	37057	41	10	—	23	1.1	—	56
1902	37732	74	31	1	50	1.9	.002	67
1903	38407	115	55	3	84	2.9	.008	73
1904	39179	61	21	1	47	1.5	.003	77
1905	40938	42	8	—	32	1.02	—	71
1906	41594	200	54	1	149	4.8	.002	75
1907	42134	81	33	4	67	1.9	.009	83
1908	42971	81	29	—	56	1.8	—	69
1909	43831	87	31	4	63	1.9	.009	70

DIPHTHERIA AND MEMBRANOUS CROUP.—These terms refer to the same disease—Membranous Croup being really Laryngeal Diphtheria. 65 cases were notified, and 16 deaths occurred. The number of cases in separate localities was :—

St. Mary's Ward	...	...	...	13
Luton Ward	...	...	...	37
St. John's Ward	...	...	...	15

The numbers affected at different ages were :—

Under 1 year	...	...	2
1 to 5 years	...	...	21
5 to 15 years	...	...	35
15 to 25 years	...	...	4
25 to 65 years	...	...	3

In the following Table will be found the number of cases and deaths from Diphtheria during the past ten years :—

Year.	Cases Notified.				Deaths.
1900	55	...	8
1901	80	...	9
1902	35	...	7
1903	23	...	3
1904	26	...	2
1905	25	...	2
1906	29	...	3
1907	30	...	4
1908	34	...	7
1909	65	...	16

It will be noted that not only was there an increase in the number of cases notified, as compared with the previous 7 years, but there was also a large increase in the mortality, showing the type of disease to be of a more virulent character. 42 of these cases were removed as expeditiously as possible to St. Williams' Hospital, but many of them succumbed rapidly after admission. The early administration of Antitoxin is of the greatest importance in the successful treatment of this disease, and should be used on the first sign of throat invasion. Many people do not call in medical advice sufficiently early, thereby diminishing the chance of successful treatment. Experience has convinced me that the prompt administration of Antitoxin should be a routine measure in all cases, and in order that no undue delay need occur, a supply is kept at the Town Hall, and will be supplied to medical men on application to the Sanitary Inspector, cost price only being charged.

Arrangements are also in force by which Bacteriological diagnosis can be secured in cases of doubt. The number of cases in which throat cultures were examined was 39. In 10 of these the Diphtheria Bacillus was present, and in 29 no positive results were obtained. The adoption of this method has resulted in a considerable saving to the community, because without the verification of doubtful cases by this test, the doctors would have had no alternative but notification, and in many instances subsequent treatment at the Infectious Diseases Hospital.

ENTERIC FEVER.—The number of cases notified was 18, of which 14 were removed to Hospital, and 3 died. The same remarks as to the value of Bacteriological diagnosis apply to this disease as to Diphtheria. These tests are provided free of charge, and are sound economical measures. I am glad to report that during the past year local practitioners have largely availed themselves of these facilities. The number of cases submitted for examination was 13, and in 11 of them the result was negative, the other 2 cases proving to be undoubted Enteric Fever. Routine inquiries were made in each case, and any sanitary defects discovered were remedied. In 2 of the cases mussels had been eaten at a period before the onset of the disease, which suggested them to be the vehicle of contamination. In other cases no clear evidence as to causation could be obtained.

DIARRHŒA AND ENTERITIS.—From these causes 27 deaths were registered—9 being due to Diarrhœa and 18 to Enteritis. Although registered under different names, they are practically one and the same disease, occurring under similar conditions, and both showing their chief incidence on children under one year of age. I have constantly alluded to the causation of this disease in my Annual Reports, and investigation proves beyond a doubt that improper methods of feeding are chiefly responsible, the specific poison being commonly introduced by means of putrefying food. The mortality amongst infants fed on artificial foods is 15 times as great as amongst breast-fed infants. When, in addition to artificial feeding, dirt and neglect prevail in and around dwellings, then the infant's prospect of existence is materially endangered, and, broadly speaking, unless the mother displays intelligence, attention and care in management, then given a hot summer, it is extremely probable that Epidemic Diarrhœa will occur, and probably prove fatal.

Of ERYSIPELAS there were 23 notifications and 1 death.

HOSPITAL ACCOMMODATION.—The number of beds available for the isolation of infectious disease is 80, there being separate blocks for the treatment of Scarlet Fever, Diphtheria, and Enteric Fever. Under ordinary conditions the number of beds is adequate, but occasionally the resources of the Institution are in so much request that it is impossible to take in all cases requiring admission. In the past this has been met in times of great pressure by increasing the number of beds, but the Medical Officer has decided in future not to do this, and I fully agree with his decision. All infectious cases require an ample supply of floor and air space, and if this is reduced beyond a certain minimum, the degree of infectivity, and the mortality rate is materially increased.

The value of the Hospital is enormous, and its advantages are so realised by the public that they now request admission, instead of resisting it as was often the case some years ago.

DISINFECTION.—After the removal or recovery of every case of infectious disease, a thorough disinfection of rooms, clothing and bedding is carried out. Rooms are fumigated with the vapour of Formic Aldehyde, or Sulphurous Acid Gas, and infected clothing and bedding is removed in a suitable van to the Disinfecting Station, where it is subjected to the action of superheated steam in Thresh's Steam Disinfecting Apparatus.

The Borough possesses its own ambulance for the removal of patients, and where the entire disinfection of a house is necessary, a shelter is provided for the temporarily homeless family. In cases where infected articles have to be destroyed, compensation is paid according to the provisions of the Public Health Act. Details respecting the number of houses and articles disinfected appear in the report of the Inspector of Nuisances, which is annexed.

SCHOOLS AND INFECTIOUS DISEASE.—I have already referred to the means for securing information respecting non-notifiable infectious diseases in schools, but the whole question of the spread of infectious disease in schools is one of very great importance. In addition to the exclusion of children from school, who are known to be infected, or exposed to infection, it is very desirable that the teachers should have some guidance as to the symptoms of onset of the chief infectious diseases, and the symptoms which may be manifested by children who have recently passed through the acute stages of these diseases. With this object I have drawn up a schedule showing—(1) the mode of onset, (2) incubation period, (3) day of appearance of rash, (4) period of isolation, (a) for those attacked, (b) for those exposed to attack, in the case of Scarlet Fever, Diphtheria, Measles, Chicken Pox, Mumps, Whooping Cough, and German Measles. A copy of this schedule, which has been approved by the Education Committee, and supplied to the head teachers of each school, is appended to the Report. The early recognition of infectious disease, and the exclusion of all children from infected houses, and of children known to have been in contact with a source of infection are essential matters, and if combined with a careful search for unrecognised or undiscovered cases which may be carriers of infection, the necessity of school closure is unlikely to arise. It is a measure which is in my opinion too frequently resorted to in some districts, and has few if any advantages over the system of individual exclusion, although it naturally meets with the approval of school managers and teachers, who do not like to see their percentage attendance diminished.

The necessity for school closure has not arisen in your district during 1909.

HOUSING.—Considerable attention has been paid to the question of house accommodation, and the wonder is that with all the existing regulations respecting structure, drainage, air space, etc., there should remain such a large amount of insanitary property as can always be found in every district.

Not many new houses have been erected during 1909, but in all cases plans are submitted to your Medical Officer of Health for approval, and the drainage systems are only completed after inspection by your Inspector of Nuisances. No house is permitted to be built without a sufficiency of open space.

There is of course a large amount of old property in Chatham, but its defects are largely counter-balanced by the fact that in the majority of instances there is open space round the dwellings. Property of this class is the despair of the Sanitary Official, and from one cause and another it is constantly requiring something to be done, and I regret to say that in the majority of instances the tenants do not take the care they ought to take, especially in regard to the interiors. There are several houses in Chatham that I have reported upon again and again as being unfit for habitation. Notices are served and specifications issued, and at considerable expense they are renovated and cleaned, only to relapse into a similar condition. I think in many instances the owners would do well to demolish houses like these, and erect suitable dwellings in their place. They would save themselves much expense, they would be freed from the constant annoyance of receiving notices, and incidentally would remove centres of disease and degredation from the town. No doubt this will be considered a counsel of perfection, and I fear the suggestion is very unlikely to be acted upon.

Under Section 30 of the Housing of the Working Classes Act, Part II., 69 houses were reported as being so dangerous or injurious to health as to be unfit for human habitation. Notices were served in each case, accompanied by a specification of the work required to place them in a sanitary condition.

22 houses have been closed, and a total of 58 houses, some of them standing over from the previous year, have been made fit for habitation.

During 1908 a house-to-house inspection of the district was commenced, and a register is being compiled giving particulars of every dwelling.

The total number of houses visited in connection with this special work was 659, and opportunity has been taken to remedy various defects. For instance several houses were specially reported upon under the Housing of the Working Classes Act, and the following work was also carried out :—

No. of Houses cleansed and limewashed	38
„ Yards repaved	34
„ Drains relaid	2
„ Bell traps removed and replaced by yard ... gullies	6
„ Roofs repaired	10
„ Broken floors and ceilings repaired	14
„ Other repairs.....	6

The whole cry of modern housing reform is to provide better houses for the people, but a long experience has convinced me that the cry ought to be for better people for the houses. The greatest social evil of the present day is the presence of squalid, dirty, dissolute and lazy people in our midst, and it is a lamentable fact that the vast amount of religious and social effort expended on this class of people does little towards mitigating the evil. Filthy habits are a danger to the community, and special legislation and punishment are necessary before they can be satisfactorily dealt with. There is an excuse for poverty, but there should be none for dirt.

The Housing and Town Planning Act came into operation in December last. Amongst other things it enjoins on all local authorities the definite statutory duty of providing proper housing accommodation for the working classes, and the procedure for closing and demolition orders is amended and simplified. The erection of back-to-back houses is prohibited, and the Local Government Board have power to revoke unreasonable bye-laws. Schemes for Town Planning in respect of land in course of development for building purposes may be made. The other provisions of the Act, which are very numerous, chiefly refer to matters not of special interest to Borough Councils.

WATER SUPPLY.—This is adequate in quantity, and excellent in quality. It is obtained from deep borings in the chalk, supplemented by an additional supply from the upper greensand. The borings are in the Luton Valley, and the water is pumped from there into storage reservoirs, whose joint capacity is about 9,000,000 gallons. Two of these are situated on the Rainham Road, and one on the Maidstone Road. The supply is constant, and periodical analyses show its freedom from contamination. Situated as the borings are I think the risk of pollution is very slight, indeed hardly possible, but in order to further minimise this risk all cesspits constructed in the vicinity of the Waterworks are rendered absolutely watertight. I am not aware of the existence of any shallow wells in the town, the few remaining ones having been closed of late years.

SEWERAGE AND DRAINAGE.—This is not satisfactory, although the health of the Borough might suggest that it was. Surface drainage exists, but excrementitious matter is stored in cess-

pools until they are full enough to require emptying. They are sunk in the chalk, and a certain amount of percolation takes place, so that many of them go for long periods without needing attention. Every endeavour is made to comply with the notices stating that they are full, and to empty them as quickly as possible, and the work is carried on both by day and night. A large amount of material is in use for this purpose, and there should be no stint in this matter, it being in the highest degree essential for the health of the community that cess-pools should be thoroughly and promptly emptied directly they are full. Under any circumstances the system is undesirable, and Main Drainage should take its place. The locality would develop much better if it were properly sewered. Great care is exercised in regard to the construction and supervision of house drains. Inquiries into the number and type of the sanitary conveniences in use in the district give the following approximate figures :—

Panned and Trapped Closets, with water flush ...	5226
Panned and Trapped Closets without a flush, <i>i.e.</i> , flushed by hand	2228
Open Privies	2464
Earth and Pail Closets (Walderslade).....	41

CLEANSING AND SCAVENGING.—The removal of House Refuse is carried out by the Surveyor's Department, and the method in use has proved very satisfactory. In some parts of the town the refuse is removed daily, in others the carts call three times a week. It is the duty of the householder to place a receptacle containing the refuse outside his dwelling. The greatest difficulty and the most unsatisfactory feature of the system is in relation to the kind of receptacle. The majority in use are chiefly characterised by their unsuitability for the purpose. It seems to me to be sound common sense that every householder should be responsible for placing his rubbish in properly covered bins. Under the old system it was compulsory to provide a suitable fixed covered dust bin, but apparently no powers have been discovered to compel the provision of portable covered bins. I am quite sure the general opinion of the community would be in favour of this plan. Another defect is that the dust carts are not properly covered, the result being that on windy days much objectionable material is blown about.

Fish offal is removed daily in covered bins, which are placed in a closed van. There is no nuisance from this.

Refuse is disposed of to local farmers, and used for manurial purposes. A more sanitary method would be destruction by fire in a suitable apparatus.

The various proceedings taken for the abatement of nuisances will be found in the Inspector's Report, which is appended.

Under Section 49 P.H.A. instructions are given to proprietors of stables, etc., for a strict periodical removal of manure at least once in seven days.

COMMON LODGING HOUSES.—There are 15 of these places on the Register. They are all the subject of regular inspection, and generally speaking are clean and well kept. Details of all notices served appear in your Inspector's report. Every keeper of a common Lodging House is supplied with a copy of Bye-Laws and Regulations for their management. No case of infectious disease has been reported during 1909. Under the Public Health Amendment Act, 1907, greatly improved powers of control now exist, and during the year notices were sent to all keepers, drawing special attention to sections 70, 71, 72 and 73 of the Act. The name of the person in charge must be registered, and he must be in attendance daily from 9 p.m. to 6 a.m. The Local Authority has now power to cancel the name of any objectionable person from the register, and if a keeper of a common lodging house is convicted of any offence under the Bye-Laws he may be removed from the register.

In my Report for 1908, I drew your attention to the increasing tendency to sublet parts of houses, and to the necessity of possessing Bye-Laws for dealing with houses of this character. Your Law and Parliamentary Committee have held several meetings for the consideration of this matter, and have decided to adopt suitable Bye-Laws, which will I hope be shortly submitted for official sanction.

BYE-LAWS.—No Borough can be well controlled without suitable Bye-Laws, and those now in force are concerned with :—

1. New streets and buildings.
2. Drainage of existing buildings.
3. The cleansing of footways and pavements, the removal of house refuse, the cleansing of earth closets, privies, ashpits, and cesspools.
4. Nuisances.
5. The removal of offensive matter through the streets.
6. The duties of the occupier in respect of house refuse.
7. Slaughter-houses.

SLAUGHTER HOUSES. — There are 16 registered Slaughter Houses, and 1 licensed, the difference being that all new Slaughter Houses are licensed, and subject to annual renewal, which depends on the satisfactory observance of regulations by the occupier. Periodical inspections, and frequent surprise visits are made, and there have been no complaints during the year. Private Slaughter Houses have many disadvantages, and until they are abolished in

favour of Public Abattoirs there can be no satisfactory control of the meat supply. I believe the majority of butchers do their very best to supply wholesome meat, but there can be no question that private Slaughter Houses give a partial security to those unscrupulous persons who traffic in diseased and wasted cattle. Under the conditions of Public Abattoirs the public would get a guarantee of the soundness of meat, which at present it does not obtain.

No carcasses or parts of carcasses have been condemned during the year for Tuberculosis, but under sect. 117, P.H.A., 1875, 4 carcasses of beef were seized and condemned. The whole question of meat warranty requires legislative action.

UN SOUND FOOD.—The following seizures were made during the year :—

5 trunks of mixed fish.
20 foreign rabbits.
4 carcasses of beef.
Various quantities of “specked” and over ripe fruit.

DAIRIES, COWSHEDS, AND MILK SHOPS.

No. of registered Cowkeepers.....	19
No. of registered Dairymen and Purveyors of Milk	44

The regulations issued by the Local Government Board in connection with the above are for prescribing and regulating the lighting, ventilation, cleansing, drainage, and water supply of Cowsheds and Dairies, and for securing the cleanliness of Milk Stores, Milk Shops, and Milk Vessels used for containing milk for sale by persons following the trade of Cowkeepers and Dairymen, and for prescribing precautions to be taken by purveyors of milk, and persons selling milk by retail, against infection or contamination.

The procedure adopted in regard to the licensing and registration of Dairies, Cowsheds and Milk Shops is unchanged, and is in accordance with the provisions of the Dairies, Cowsheds, and Milk Shops' Order, 1885. Regular and frequent inspection of Cowsheds, &c., have been made during the year, and in August I made a special report to your Committee descriptive of the condition of every Cowshed in the District, and in concluding made the following remarks and suggestions :—

“The chief conditions requiring amendment arise from faulty management, and the general attitude of Cowkeepers is one of apathy. Some of them appear to regard it as a hardship, or an absurdity that they should be expected to take such measures as will ensure a clean milk supply. This could easily be secured if cowkeepers would maintain a higher standard of cleanliness in their sheds, animals and milkers. If we can set before the producer a reasonable ideal, then his own interest should secure his co-operation.

The chief sources of pollution of milk in this district, as in others, are :—

1. The dirty condition of the Cowshed.
2. The hands and persons of milkers.
3. The udders and teats of cows.
4. The dirty state of the animals' hind quarters.
5. The general absence of facilities for washing.

The structural condition of a cowshed should be such as to secure ample space, adequate light, ventilation, drainage, and water supply, and given these conditions the difficulties of keeping it clean are reduced to a minimum. The best floor is one of well roughed or ridged concrete. A very common fault is for the animals to stand on the bare ground, which soon becomes uneven, and as a consequence difficult to keep clean. All windows should be made to open. In order that the ideal above mentioned may be attained I would suggest the following daily routine, the practice of which would conduce alike to the welfare of the consumer, the producer and his stock :—

DAILY ROUTINE.—All cowsheds to be kept absolutely clean.

To be washed out, and manure removed before milking (the reverse is often the case).

Animals to be groomed, udders, teats, and surrounding parts to be washed and then dried with a clean dry cloth.

Milkers to wear overalls which can be washed and frequently changed.

Soap and water, basins, and clean towels to be kept close to the Cowshed, and milkers to wash before milking.

All cans to be first rinsed out with cold water, and then with hot soda solution, or a steam jet, then again rinsed with cold water, and stored where they are free from risks of contamination.

After consideration your Committee resolved (a) That notice be served on the respective owners of the several Cowsheds to do such limewashing, cleansing and repairs as are set out in the Report ; (b) That the suggestions of the Medical Officer of Health as to daily routine be printed, and a copy forwarded to each Cowkeeper with a request to carry out the same.

The work required to be done has been carried out in most cases, and the suggestions as to routine have also been supplied on stout cards and in bold print, so that no possible excuse can exist for their neglect. They are perfectly easy to carry out, but as by nature and training the average worker in a Cowshed is a dirty individual, I have personally little hope of their general adoption. The pressure of public opinion, and more stringent regulations are the only influences calculated to overcome the ignorant prejudices of this class

of person. The unsuccessful Milk and Dairies Bill of the last Parliament will no doubt be reintroduced with much needed powers for the control and administration of milk supplies. The main objects required are :—more effective registration of Dairies and Dairymen, compulsory inspection of Dairies and of Animals, the prohibition of Milk for sale where there has been infectious disease, and also Tuberculosis, regulations as to the importation of Milk, and for securing the supply of pure and wholesome Milk.

In addition to the milk produced in the District, a very large quantity is brought in by rail, and cannot be subjected to the same control as is exercised in the case of the local supplies.

In this Borough your Veterinary Inspector reports monthly on the condition of all milch cows.

The conditions governing the sale of milk in many small general shops leave much to be desired, especially in connection with its storage. The following regulation is in force :—“ Every purveyor of milk, or persons selling milk by retail shall cause every vessel containing milk for sale to be kept properly covered, or the milk in such vessel to be otherwise sufficiently protected from contamination by dust and flies, or other deleterious matter.

SCHOOLS.—Your Medical Officer of Health is also School Medical Officer, and the arrangements for carrying out the duties of medical inspection of school children are under his supervision. The sanitary condition of schools has been the subject of investigation during the past year, and is very fully commented on in the Annual Report of the School Medical Officer. The action taken with respect to the prevention of infectious disease, both notifiable and non-notifiable has been alluded to in the present report when dealing generally with the subject of infectious diseases.

FACTORY AND WORKSHOP ACT, 1901.—Under Section 132 of the above Act it is the duty of the Medical Officer of Health of every District Council to report specifically on the Administration of this Act in Workshops and Workplaces, and to include his observations thereon in his Annual Report. A Table is issued by the Home Office, containing such particulars as lend themselves to statistical treatment, which has been filled in and is appended to this report.

The chief points to be reported on are in connection with the Sanitary Administration of the Factory and Workshop Act, so far as its provisions are concerned with the duties of District Councils.

They may be summarised as follows :—

1. Sanitary conditions of Workshops and Workplaces, including :—

- (a) Cleanliness.
- (b) Air space.
- (c) Ventilation.
- (d) Drainage of floors on which wet processes are carried on.
- (e) Provision of suitable and sufficient sanitary conveniences.

2. Special sanitary provisions for Bakehouses.

3. The prevention of home work being carried on in dwellings which are injurious or dangerous to the health of the workers through overcrowding, want of ventilation, or other sanitary defects, or in dwellings in which notifiable infectious disease exists.

4. The keeping of lists of Outworkers in certain branches of industry, which are furnished by employers, and the transmission of the name and place of any such Outworker, who does not reside in the District, to the Council of the District in which he resides.

5. The keeping of a Register of Workshops.

In the Home Office Table, which is attached, will be found particulars of a general nature respecting the number of inspections made, and the defects found and remedied. The subjoined particulars respecting various industries carried on in the Borough will be of interest, and are supplemental to those recorded in the Home Office Table.

The total number of Workshops registered in the District is 412, including :—

Retail Bakehouses	26
Tenement Workshops	none
Domestic Workshops	62
Laundries (Workshop).....	6
Other Workshops.....	318

In addition there are 3 Factory Laundries.

The total number of non-textile Factories on the Register is 33, of Workshops employing men only 200, and of Workplaces 69.

The WORKSHOPS comprise the following trades:—Bootmakers 32, Brass Finishers and Pewterers 2, Blind Makers 2, Coach Builders and Wheelwrights 8, Coopers 1, Cabinet Makers 10, Cycle Works 5, Clay Pipe Makers 1, Carpenters and Joiners 21, Hoop Makers 2, Masons 2, Modellers 1, Ornamental Masons 2, Polishers 7, Picture Frame Makers 14, Painters 12, Plumbers 7, Saddlers 10, Sweet Makers 4, Smiths 6, Tailors 26, Tin Smiths 6, Upholsterers 7, Undertakers 2.

NON-TEXTILE FACTORIES.—Bakehouses 2, Bookbinders 1, Bootmakers 2, Engineering 1, Electrical Works 1, Flour 2, Joinery 5,

Laundries 3, Mineral Water Works 5, Printing 7, Soap Compounds 1, Sausage Making 2, Tobacco 1.

WORK PLACES.—Bottling 5, Gate Making 4, Wharves 8, Hair Cutting 40, Stables 12.

Notices issued respecting defects 18.

The following defects were remedied :—

Want of Cleanliness	11
Want of Ventilation	1
Overcrowding	3
Want of Drainage of Floors	1
Unsuitable Sanitary Accommodation ..	1

OUTWORKERS.—Most of these are females, employed in the manufacture of wearing apparel. The supervision of the homes of outworkers is one of the most important duties of Local Authorities under this Act, and is rendered the more necessary because the time given to this work often precludes proper attention to domestic cleanliness.

The total number of outworkers registered during the year was 594.

The number of employers returning lists of outworkers was 14, and of contractors 2. These lists have to be sent in twice yearly during February and August. In cases of omission comply notes are issued, and no necessity for prosecution has arisen.

The number of outworkers residing out of the district was 103. Their names were notified to the respective authorities of the districts in which they reside.

From other authorities 51 names of outworkers residing in the district, but doing work for outside employers were received.

During the year 542 visits were paid to the homes of outworkers. No notices in respect of unwholesome premises were issued, but in seven instances work was prohibited on account of infectious disease.

In the following return will be found particulars of various trades in which women and young persons are employed :—

	Women.	Young Persons.
Bookbinding	14	4
Clothing	374	92
Dressmaking	248	106
Fancy Needlework.....	1	2
Laundry	74	6

Millinery	47	59
Rag Sorting	9	0
Shirt Making	30	3

In the Act a young person is defined as one who is over 14 and under 18 years of age.

The Special Sections of the Act dealing with the question of Sanitary Accommodation are inoperative here, and all offences are dealt with under Section 22, Public Health Amendment Act, 1890. Under this Section the Borough Surveyor is the official specially charged with dealing with the provisions of the Section in regard to sufficiency and suitability.

BAKEHOUSES.—The number of Bakehouses on the register is 26. There are 10 underground Bakehouses and 2 Factory Bakehouses.

Bakehouses are the subject of special sanitary regulations as set out in Sections 97 to 102 of the Factory and Workshop Act. Under these regulations Closets must not communicate directly with, nor must there be any drains opening into a Bakehouse, and the cistern supplying water to a Bakehouse must be separate and distinct from the w.c. cistern. The inside walls and ceilings of Bakehouses must be limewashed or painted with oil and varnished, and the limewashing and cleansing of paint must be done every six months. No sleeping place is permitted on the same floor as a Bakehouse unless constructed according to the requirements of the Act.

The underground Bakehouses were all in use before the passing of the Act, but it was enjoined in Section 101 that no underground Bakehouse should be used after January 1st, 1904, unless certain stipulations as to light, ventilation, and construction, were carried out.

All Bakehouses have been inspected, and in very few instances have there been evidences of neglect—chiefly in respect of lime-washing—which has been at once remedied. Cleanliness is of the greatest importance, and generally speaking the Bakehouses are satisfactory.

The general work of the Sanitary Department has been carried out satisfactorily during the year, and the two Inspectors have proved adequate for the necessary duties. The question of increased office accommodation is one demanding your consideration.

In concluding I beg to thank the Chairman and Members of the Sanitary Committee for the manner in which they have invariably

accepted and acted on the various recommendations and Reports which I have had the honour to bring before them.

My thanks are due to Mr. Coles Finch, for particulars of rainfall during the year.

I am, Gentlemen,

Your obedient servant,

J. HOLROYDE, F.R.C.S.E., D.P.H.

Chatham,

February 26th, 1910.



Appended are Tables I., II., III., IV., and V., issued by the Local Government Board.

Home Office Table for returns under the Factory and Workshod Act.

Schedule of Infectious Diseases.

Statistics of Rainfall.

Report of Inspector of Nuisances.



CHATHAM.—For Whole District.

TABLE I.

YEAR.	Population estimated to middle of each year.	No. of Births.	Birth Rate.*	Deaths under 1 year.	Rate per 1,000 Births registered.	Total Deaths at all Ages.	Total Death Rate.*	Deaths in Public Institutions.	Deaths of Non-residents registered in District.	Deaths of Residents registered beyond District.	Deaths at all Ages. Nett.	Death Rate* at all Ages. Nett.
1899 ...	35972	1062	29.5	193	180	731	20.3	173	38	45	738	20.04
1900 ...	36495	1065	29.02	168	165	702	19.4	188	50	63	715	19.5
1901 ...	37057	1022	27.9	157	154	648	17.4	149	45	37	638	17.2
1902 ...	37732	1066	28.2	174	163	676	17.9	163	53	51	674	17.8
1903 ...	38407	1112	28.9	143	129	583	15.	155	40	31	574	14.9
1904 ...	39179	1172	29.9	209	178	659	16.8	175	71	29	630	16.
1905 ...	40938	1134	27.7	143	126	615	14.4	77	63	27	578	14.1
1906 ...	41594	1107	26.7	153	138	593	14.2	143	58	25	560	13.4
1907 ...	42134	1100	26.1	136	124	591	14.	140	59	49	581	13.7
1908 ...	42971	1038	24.2	132	127	578	13.4	136	62	42	711	12.9
Averages for years 1899 to 1908.	39237	1087	27.5	160	148	637	15.3	149	53	39	624	15.9
1909 ...	43831	1093	24.9	117	107	538	12.3	143	63	42	517	11.8

*Rates calculated per 1,000 of estimated population.

Institutions within the District receiving sick and infirm persons from outside the District.	Institutions outside the District receiving sick and infirm persons from the District.
Medway Union Infirmary.	St. Bartholomew's Hospital, Rochester. St. William's Fever Hospital, Rochester. Fort Pitt Military Hospital, Rochester. Royal Naval Hospital, Gillingham.

NOTES TO TABLE I.

The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-Resident" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, work-houses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made should be given on the back of this Table.

Area of District in acres (exclusive of area covered by water), 4444.298; total population at all ages 37,057; Number of inhabited houses 7,242; Average number of persons per house 4.8; at Census of 1901.

TABLE II.

CHATHAM URBAN DISTRICT.

NAMES OF LOCALITIES.	WHOLE DISTRICT.				ST. MARY'S WARD.				LUTON WARD.				ST. JOHN'S WARD.				WORKHOUSE.		MEL. HOS.
	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Deaths at all Ages.	Deaths under 1 year.	
1899 ...	35972	1062	731	193	10310		197	63	14590		207	77	11072		154	48	133	6	40
1900 ...	36495	1065	702	168	10027		176	55	15107		199	57	11361		139	50	158	6	30
1901 ...	37057	1022	648	157	11706		176	63	15125		204	60	10226		152	31	82	3	24
1902 ...	37732	1066	676	174	10190	248	174	56	15310	531	209	62	12232	208	171	48	96	8	24
1903 ...	38407	1112	583	143	9555	246	137	42	17312	565	178	54	11572	301	144	41	86	6	27
1904 ...	39179	1172	659	209	9552	247	153	59	18000	615	214	88	11878	310	159	54	138	8	37
1905 ...	40938	1134	578	143	9784	228	148	43	18850	609	228	70	12304	297	125	27	70	3	7
1906 ...	41594	1107	560	152	9873	229	124	61	19452	603	221	70	12269	275	129	20	86	1	
1907 ...	42134	1100	591	136	9772	206	132	28	18819	612	215	61	13543	282	153	37	80	10	1
1908 ...	42971	1038	558	132	9860	197	122	30	20331	590	241	62	12780	251	121	37	74	3	closed
Averages of years 1899 to 1908	39237	1087	628	160	10052	228	154	54	17289	589	211	66	11023	274	144	39	100	5	190
1909 ...	43831	1093	517	117	10395	214	115	36	20546	583	192	50	12930	296	130	30	80	1	

NOTES TO TABLE II.

(a) The separate localities adopted for this table should be areas of which the populations are obtainable from the census returns, such as wards, parishes or groups of parishes, or registration sub-districts. Block 1 may, if desired, be used for the whole district: and blocks 2, 3, &c., for the several localities. In small districts without recognised divisions of known population this Table need not be filled up.

(b) Deaths of residents occurring in public institutions beyond the district are to be included in sub-columns *c* of this table, and those of non-residents registered in public institutions in the district excluded. (See note on Table I. as to meaning of terms "resident" and "non-resident.")

(c) Deaths of residents occurring in public institutions, whether within or without the district, are to be allotted to the respective localities according to the addresses of the deceased.

(d) Care should be taken that the gross totals of the several columns in this Table respectively equal the corresponding totals for the whole districts in Tables I. and IV.: thus, the totals of sub-columns *a*, *b* and *c* should agree with the figures for the year in the columns 2, 3 and 12, respectively, of Table I.: the gross total of the sub-columns *c* should agree with the total of column 2 in Table IV., and the gross total of sub-columns *d* with the total of column 3 in Table IV.

TABLE III.

CHATHAM URBAN DISTRICT.

Cases of Infectious Diseases notified during the year 1909.

Notifiable Diseases	Cases Notified in Whole District.						Total Cases Notified in each Locality.				No. of Cases re-moved to Hospital.				Total Cases removed to Hospital.	
	At all Ages.	Under 1 year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 & upwards.	ST. MARY'S WARD.	LUTON WARD.	ST. JOHN'S WARD.	MEDWAY WORKHOUSE.	ST. MARY'S WARD.	LUTON WARD.	ST. JOHN'S WARD.		MEDWAY WORKHOUSE.
Small Pox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Group)...	65	2	21	35	4	3	...	13	37	15	...	12	21	9	...	42
Erysipelas	23	...	...	1	...	17	5	2	12	4	5	...	...	...	3	3
Scarlet Fever	87	1	30	43	6	7	...	10	52	17	8	8	43	12	...	63
Typhus Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	18	...	2	2	5	9	...	7	6	2	3	6	4	1	3	14
Relapsing Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	1	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals...	194	3	53	81	15	37	5	32	108	38	16	26	68	22	6	122

NOTES TO TABLE III.

The localities adopted for this table should be the same as those in Tables II. and IV.

State in space below the name of the isolation hospital, if any, to which residents in the district, suffering from infectious disease, are usually sent, and the accommodation, available for the district, afforded to it. Mark (H) the locality in which it is situated, or if not within the district, state where it is situated, and in what district. The name of the authority by whom the hospital is provided should also be given. Mark (W) the locality in which a workhouse is situated.

* This space may be used for record of other disease the notification (compulsory or voluntary) of which is in force in the district.

† These age columns for notifications should be filled up in all cases where the Medical Officer of Health, by inquiry or otherwise, has obtained the necessary information.

** Column 8 should be filled up with the Totals of cases removed to Hospital, whether the District is divided into separate localities or consists of only one area.

Isolation Hospital.—St. Willlam's Rochester.

Total available Beds.—80.

Number of Diseases that can be concurrently treated.—3.

TABLE IV.

CHATHAM DISTRICT.*Causes of, and Ages at, Death during the Year 1909.*

Causes of Death.	Deaths in whole District at Subjoined Ages.							Deaths in Localities at all Ages.					Total Deaths in Public Institutions.
	All Ages.	Under 1 year	1 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 65 years.	65 and upwards.	St. Mary's Ward.	Luton Ward.	St. John's Ward.	Medway Workhouse.	Marine Infirmary.	
Scarlet Fever ...	4		2	2				1	3				
Whooping Cough	1	1							1				
Diphtheria and Membranous Croup ...	16	1	7	8				4	9	3			
Croup ...													
Fever, Enteric...	3		1		1	1		2	1				
Epidemic influenza ...													
Diarrhœa...	9	6	3					2	5	2			
Enteritis ...	18	16		1			1	2	9	7			
Puerperal Fever	1					1			1				
Erysipelas ...	1						1				1		1
Phthisis ...	39		2	4	5	28		4	18	5	12		18
Other Tubercular Diseases...	20	7	5	6	2			4	7	9			2
Cancer, Malignant Disease..	31					15	16	5	10	9	7		14
Bronchitis ...	43	12	3			10	18	14	13	9	7		13
Pneumonia ...	24	8	7			4	5	4	10	6	4		5
Pluerisy ...	1					1				1			
Other Diseases of Respiratory Organs ...	1						1			1			
Alcoholism } Cirrhosis of } Liver ... }	6					3	3	3	1	2			
Venereal Disease	9	3		1		3	2	2	2	1	4		8
Premature Birth	26	26						9	9	8			
Diseases and Accidents of Parturition ...	1	1							1				
Heart Diseases...	118			2	4	51	61	21	37	36	24		40
Accidents... ..	19	3	3	3		8	2	6	7	5	1		2
Suicides	3				1	2		1	1	1			
Urinary System													
Nervous System													
All other Causes	123	33	12	7	1	27	43	31	47	25	20		35
All Causes ...	517	117	45	34	14	154	153	115	192	130	80		138

TABLE V.

CHATHAM DISTRICT.*Infantile Mortality during the Year, 1909.*

Deaths from stated Causes in Weeks and Months under 1 Year of Age.

Cause of Death.			Under 1 Week.	1 to 2 Weeks.	2 to 3 Weeks.	3 to 4 Weeks.	Total under 1 Month.	1 to 2 Months.	2 to 3 Months.	3 to 4 Months.	4 to 5 Months.	5 to 6 Months.	6 to 7 Months.	7 to 8 Months.	8 to 9 Months.	9 to 10 Months.	10 to 11 Months.	11 to 12 Months.	Total Deaths under 1 Year.
All Causes	{ Certified ...	...	16	5	7	7	35	14	8	16	10	5	9	3	3	3	5	2	113
	{ Uncertified ...	...	4				4												4
Common Infectious Diseases.	Small-pox ...	...																
	Chicken-pox ...	...																
	Measles ...	...																
	Scarlet Fever...	...																	
Diarrhoeal Diseases.	Diphtheria: {																		
	Croup {										1								1
	Whooping Cough {																1		1
	Diarrhœa, all forms {					1	1	2		1			2						6
Wasting Diseases.	Enteritis (not Tuberculous) {					1	1	1		4	2	2	4	2					16
	Gastritis, Gastrointestinal Catarrh {																		
	Premature Birth {		17	3	4	2	26												26
	Congenital Defects {			1		1	2			1									3
Tuberculous Diseases.	Injury at Birth {																		
	Want of Breast-milk {							1	1										2
	Atrophy, Debility, Marasmus {					1	1	3	2	4	2				1		1		14
	Tuberculous Meningitis {											2				1			3
Other Causes.	Tuberculous Peritonitis: {																		
	Tabes Mesenterica {									1						1			2
	Other Tuberculous Diseases {									1							1		2
	Syphilis ...	...	2				2			1									3
Other Causes.	Rickets ...	...																	1
	Meningitis (not Tuberculous) {								1								1		2
	Convulsions ...	...		1	1	1	3	1			2	1	1				1		9
	Bronchitis ...	...						4			2		2		2		1	1	12
Other Causes.	Pneumonia ...	...						2	2	1	1			1		1			8
	Suffocation, Overlaying {																		
	Other Causes ...	...	1		1	1	2	1		1	2								3
							1		1										4
All Causes ...			20	5	7	7	39	14	8	16	10	5	9	3	3	3	5	2	117

The Whole District. Population, estimated to middle of 1909—43,831.

Births in the year:—Legitimate, 1044; Illegitimate, 49.

Deaths in the year:—Legitimate Infants, 103; Illegitimate Infants, 14.

Deaths from all causes at all ages, 517.

NOTES TO TABLES IV. AND V.

- (a) In Table IV. all deaths of "Residents" occurring in public institutions, whether within or without the district, are to be included with the other deaths in the columns for the several age groups (columns 2-8). They are also, in columns 9-15, to be included among the deaths in their respective "Localities" according to the previous addresses of the deceased as given by the Registrars. Deaths of "Non-Residents" occurring in public institutions in the district are in like manner to be excluded from columns 2-8 and 9-15 of Table IV.
 - (b) See notes on Table I. as to the meaning of "Residents" and "Non-residents," and as to the "Public Institutions" to be taken into account for the purposes of these Tables. The "Localities" in Table IV. should be the same as those in Tables II. and III.
 - (c) All deaths occurring in public institutions, situated within the district, whether of Residents or of Non-residents, are, in addition to being dealt with as in note (a), to be entered in the last column of Table IV. The total number in this column should equal the figures for the year in column 9, Table I.
 - (d) The total deaths in the several Localities in columns 9-15 of Table IV. should equal those for the year in the same Localities in Table II., sub-columns c. The total deaths at all ages in column 2 of Table IV. should equal the gross total of columns 9-15, and the figures for the year in column 12 of Table I.
 - (e)* Under the heading "Diarrhœa" are to be included deaths registered as due to Epidemic diarrhœa, Epidemic enteritis, Infective enteritis, Zymotic enteritis, Summer diarrhœa, Dysentery and Dysenteric diarrhœa, Choleraic diarrhœa, Cholera and Cholera Nostras.
- In addition, and as regards deaths of children under one year of age, under the heading "Diarrhœa" in column 3 of IV. are to be included all deaths classified as "Diarrhœal diseases" in Table V.
- Under the heading of "Enteritis" in Table IV. are to be included only deaths over one year of age registered as due to Enteritis, Muco-enteritis, Gastro-enteritis, Gastric catarrh, Gastritis, and Gastro-intestinal catarrh, unless from information obtained by enquiry from the certifying practitioner or otherwise, the Medical Officer of Health should have reason for including such deaths under the specific term "Diarrhœa." Deaths from diarrhœa secondary to some other well-defined disease should be included under the latter.
- f) Under headings "Cancer" and "Puerperal Fever" should be included all registered deaths from causes comprised within these general terms, thus:—Under "Cancer" should be included deaths from Cancer, Carcinoma, Malignant disease, Scirrhus, Epithelioma, Sarcoma, Villous tumor, and Papilloma of bladder, Rodent ulcer; under "Puerperal Fever" are to be included deaths from Pyæmia, Septicæmia, Sapræmia, Pelvic peritonitis, Peri, and Endo-Metritis occurring in the Puerperium.
 - (g) Under "Congenital Defects" in Table V. are to be included deaths from Atelectasis, Icterus, neonatorum, Navel hæmorrhage, Malformations and Congenital hydrocephalus
 - (h) Under "Tuberculous Meningitis" are to be included in the deaths from Acute hydrocephalus.
 - (i) Under "Other Tuberculous Diseases" are to be included deaths from Tuberculosis, Tuberculous of bones, joints and other organs, Lupus and Scrofula.
 - (j) All deaths certified by registered Medical Practitioners, and all Inquest cases, are to be classed as "Certified"; all other deaths are to be regarded as "Uncertified."

In recording the facts under the various headings of Tables I., II., III., IV. and V., attention has been given to the notes on the Tables.

Factories, Workshops, Laundries, Workplaces and Homework.

BOROUGH OF CHATHAM.

1.—Inspection.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecut'ns.
Factories (including Factory Laundries)	81	2	
Workshops (including Workshop Laundries)	379	8	
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	44	0	
Total	504	10	

2.—Defects Found.

Particulars.	Number of Defects			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts :—				
Want of cleanliness... ..	12	11		
Want of ventilation... ..	1	1		
Overcrowding	3	3		
Want of drainage of floors... ..	1	1		
Other nuisances	0	0		
Sanitary Accommodation { insufficient	0	0		
{ unsuitable or defective	1	1		
{ not separate for sexes	0	0		
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse	0	0		
Breach of special sanitary requirements for bakehouses	0	0		
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report)	0	0		
Total	18	17		

4.—Registered Workshops.

5.—Other Matters.

Class.	Number
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act... ..	0
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act.	7
Notified by H.M. Inspector ...	4
Reports (of action taken) sent to H.M. Inspector..	
Other	0
Underground Bakehouses :—	
Certificates granted during the year	0
In use at the end of the year	7

Schedule of Infectious Diseases.

DISEASE.	Mode of onset.	Incubation Period. Interval between exposure to infection and final signs of disease.	Day of illness on which rash appears.	Period of isolation of children from infected houses.	Period of isolation after suffering from disease.	REMARKS.
SCARLET FEVER ...	Chills, headache, vomiting, sore throat, flushed face.	3 to 7 days.	2nd day. First shows on neck and chest.	14 days.	8 weeks.	If patient is treated at home all children from infected house should be excluded for same period as patient.
DIPHTHERIA	Often insidious Malaise, vomiting. Membrane on throat.	3 to 8 days	No rash.	14 days.	6 weeks.	If patient is treated at home, all children from infected house should be excluded for same period as the patient.
MEASLES ...	Sneezing, running at nose and eyes, cough, febrile symptoms.	10 to 14 days.	4th day. First shows on face.	3 weeks.	3 to 4 weeks.	
CHICKEN POX ...	Slight febrile disturbance.	11 to 19 days. Usually 14th.	1st day. First on body. Fresh spots appear for 2 or 3 days.	3 weeks.	3 to 4 weeks or until scabs separate	
MUMPS ...	Slight fever, pain and increasing swelling below ear.	14 to 24 days.	No rash.	25 days.	1 week after subsidence of swelling.	
WHOOPING COUGH ...	Slight fever, Catarrhal symptoms with dry cough.	4 to 14 days.	No rash.	14 days.	6 weeks if typical cough has ceased.	
GERMAN MEASLES...	Slight febrile disturbance.	7 to 21 days. 16 to 18 most frequent.	1st or 2nd day. Appear first on face.	22 days.	3 weeks	

GENERAL.—All forms of sore throat occurring in children should be regarded with suspicion, and child sent home from school. Such action being notified to Medical Officer of Health.

RAINFALL DURING 1909,

Taken at Luton Waterworks by Mr. Coles Finch.

MONTH					DEPTH IN INCHES.
January	...	...	...	...	·76
February	...	...	...	...	·89
March	...	...	...	...	3·32
April	...	...	...	...	1·60
May	...	...	...	...	1·10
June	...	...	...	...	2·72
July	...	...	...	...	3·48
August	...	...	...	...	2·22
September	...	...	...	...	3·10
October	...	...	...	...	3·90
November	...	...	...	...	1·08
December	...	...	...	...	3·13
Total				...	<u>27·30 inches.</u>

Sanitary and Health Department,
Chatham.

MR. CHAIRMAN AND GENTLEMEN,

I have much pleasure in placing before you my Report for the year ending December 31st, 1909 :—

COWSHEDS AND MILKSHOPS.—Throughout the year the Cowsheds, Dairies, and Milkshops have been periodically visited. The Cowkeepers registered are 19, and Purveyors of Milk 44.

Notices as to cleansing of Milk Vessels, and the proper covering of the same have been distributed in the district.

One purveyor of Milk was taken before the Magistrate under the Regulation made last year for the protection of Milk from contamination.

INFECTIOUS DISEASE.—Your Inspector is pleased to say that the number of Infectious Cases notified is the smallest during the ten years of office. The number of cases moved to the Infectious Hospital totalled 124, and 176 loads of bedding put through the Steam Disinfector.

All houses in which Phthisis patients die are thoroughly disinfected, and bedding and clothing also treated in the Steam Disinfector.

The number of Books found on Infected Premises belonging to the Public Library was 20, and these were subsequently disinfected and returned to the Librarian.

Weekly Lists are still forwarded to the Educational Secretary and Librarian of all infectious cases, and children who have been in contact are kept from school for such time as the Medical Officer of Health shall direct.

It will be seen from the Home Work returns under the Factory and Workshops Act that 7 cases of Infectious Disease occurred in the homes of outworkers. All work in these cases is immediately disinfected and the outworker reported to the Manager of the Factory.

CESSPOOL WORK.—The Cesspool work has increased during the year owing mostly to the exceedingly continued rainfall.

The total number of Cesspool applications received was 2917, and of these 108 were choked drains, and 59 were not required.

The number of Loads of Liquid Sewage removed amounted to 3,881, equal to 1,552,400 gallons. 1870 night loads of sewage were also removed.

MORTUARY.—During the year 26 bodies were received into the Mortuary, viz.:—10 men, 6 women, 10 children. Of these 2 men and one woman committed suicide. Post Mortem examinations were held on the bodies of 5 men, 4 women, and 2 children. 11 bodies were buried at the expense of the Poor Law Authorities.

POLICE COURT PROCEEDINGS:—

- (1) A person using premises as a Common Lodging House without being registered. Bound over on paying costs.
- (2) Purveyor of Milk, insufficient covering to milk vessel. Bound over on paying costs.
- (3) 1 and 2, Hinkley's Court. Closing order.
- (4) Cowshed, Walderslade. Not Sanitary. Dismissed.

FISH OFFAL COLLECTION.—The fish offal collection has been carried out during the year without complaint.

The average amount disposed of is $2\frac{1}{2}$ tons per week, the fish shops on the pay book being 17, whilst the average amount of eleven shillings is collected each week.

The cost to the Ratepayers was £65 for the year, including disinfectants, new tins, etc.

Great care has been taken with the cleansing of all tins, the same being washed with boiling water and afterwards thoroughly deodorized.

COMMON LODGING HOUSES.—The number of Registered Common Lodging Houses has increased by one, making the total of 16.

These premises have all been well kept, and but few matters have required attention, viz.:—

Whitewashing	4
Repairs to Walls and Floors	3
New Guttering	1
Repairs to Windows	1

Attached is a list showing the number of Vagrants, both men and women, that have passed through the Common Lodging Houses, also the number of permanent lodgers:—

Address.	Average Number of				Infectious Disease.
	Vagrants. Men.	Women.	Permanent. Men.	Women.	
18, 20, the Brook	24	—	10	—	
Gordon Chambers	30	—	30	—	
Fair Row	1	—	12	—	
79, 81, 83, Brook (2).....	10	—	6	—	1 case
97, Brook	12	—	6	—	
99, Brook	5	—	18	—	
103, 105, Brook.....	3	3	15	6	
4, Queen Street.....	—	3	5	11	
117, 119, Brook.....	8	4	4	—	
143, Brook.....	4	—	2	—	
145, Brook.....	4	—	8	—	
167, 169, Brook.....	3	—	10	—	
125, Brook.....	4	—	5	—	
Whittaker Street	1	—	8	—	
	109	10	139	17	

It will be seen from the return that an average of 109 men and 10 women pass through the Common Lodging Houses nightly, whilst 139 men and 17 women reside permanently.

Only one case of infectious disease occurred. The house was shut up during the process of a thorough disinfection.

SLAUGHTER HOUSES.—The Slaughter Houses are 16 registered, and 1 licensed, the latter for one year only.

One Slaughter House has fallen into disuse during the year.

Five notices were served for lack of cleanliness, and failure to attain a better standard in the construction of the buildings. It would be far preferable that every slaughter house should be constructed of impervious material 6ft. in height.

Considerable time has been spent in the Slaughter Houses and in the inspection of meat, but it is impossible to do what one would like owing to their scattered positions and killing taking place in each simultaneously.

FACTORY AND WORKSHOPS ACT.—Reference to the Report of the Medical Officer of Health will show details of the work under this heading.

It will be seen that 504 visits have been made to various factories and workshops.

The workshops are generally well kept, only 18 notices being required respectively for want of cleanliness or ventilation, overcrowding and uneven flooring.

UNSOUND FOOD.—The following food stuffs have been destroyed, viz. :—

- 5 Trunks of Mixed Fish.
- 20 Foreign Rabbits.
- 4 Carcases of Beef.
- Various quantities of specked and over ripe fruit.

In commenting on the above your Inspector can submit a better condition of the fish supplies of the town, consequent on the opportunities afforded to fishmongers to complain first hand, which means condemned notes have been given in genuine cases for the recovery of the value of the fish.

There is one matter that your Inspector would however desire to see remedied, viz. :—The conditions under which the fish supplies are sold by the establishing of a distributing centre.

With regard to the seizure of specked fruit your Inspector has sent children to various greengrocers' shops for specked fruit, and in several instances they have been supplied. Warnings have been given on this matter owing to the eating of such fruit having a detrimental effect.

OBNOXIOUS TRADES.—Only one obnoxious trade is now carried on in the district, viz. :—That of gut scraper, and the manner in which the business is conducted is partly the cause of a few complaints received concerning slaughter houses, the offal being removed immediately killing has been concluded.

DRAINAGE WORK tested and inspected in connection with plans submitted to the Council :—

NEW BUILDINGS—

Rainham Road	3	Wyndham Road.....	3
Victoria Road	2	Chatham Hill	1
Luton Road.....	1	Holcombe Road	2
Palmerston Road	9	Maidstone Road	6
Beaconsfield Road	14	Dale Street	6
Pagitt Street	1	Victoria Road, Walderslade	2
Other Buildings, Walderslade.....		3	

NEW ADDITIONS TO OLD BUILDINGS—

- 143, Brook2 new w.c.'s and drainage.
- 149, BrookNew washhouse, etc.
- "Crown and Anchor"New w.c.'s, and drainage.
- "Welcome" and Reform Club...Extensions, sanitary alterations.
- "Magpie" PublichouseNew w.c.'s, urinal, and drainage.

Best Street	Washhouses and drainage.
Town Wharf	New w.c. and drainage.
72, Albany Road.....	Stable and drainage.
46, New Road	New w.c.'s and drainage.

NEW CESSPOOLS AND CESSPOOLS DEEPENED.—The number of new Cesspools dug, all with an average depth of from 15 to 20ft., was 21, and the number of Cesspools deepened 71.

I remain, Gentlemen,

Your obedient servant,

W. G. JOELS.